REMARKS

Claims 15, 16, and 18-40 are currently pending. Claims 1-14 and 17 are canceled. Claims 25 and 29-34 are withdrawn without prejudice or disclaimer. Applicants reserve the right to pursue the subject matter of any or all of the canceled or withdrawn claims in one or more continuing applications.

Claims 15, 18, 24, 27 and 28 are currently amended. Independent claim 15 is amended to incorporate the limitations of dependent claim 17 and to delete certain conditional and alternative language. The subject matter deleted from claim 15 is now being presented in new claims 34-36. Claim 18 is amended to for purpose of antecedent basis. Claim 24 is amended to provide Markush format and to delete certain alternative language. The subject matter deleted from claim 24 is presented in new claims 37 and 38. Claims 27 and 28 are amended to delete certain alternative language. The subject matter deleted from claims 27 and 28 is presented in new claims 39 and 40, respectively. No new matter is added by way of introducing these amendments and new claims.

With respect to the Examiner's requirement for restriction set forth in section 1 of the Restriction Requirement, Applicants elect the claims of Group I without traverse.

With respect to the Examiner's requirement for restriction set forth in section 3 of the Restriction Requirement, Applicants provisionally elect the following: "does not comprise a selectable marker," "wherein the genetic sequence encoding the antidote is not added to the construct," "ccdB," "yeast cell," "an exogenous compound," "chloroplast," and "two different toxic genes" all with traverse.

The Examiner alleges that the restriction set forth in section 3 of the Restriction Requirement is proper because certain claims are "directed to more than one biologically distinct organisms and structurally distinct genetic constructs." The Examiner also alleges that elements of claims that are related by conditional or alternative language "are deemed to lack unity of invention *a priori* because they are not so linked as to form a single general inventive concept under PCT Rule 13.1." Applicants do not agree.

The unity of invention requirements under PCT Rule 13.1 is implemented into the Rules of Patent Practice through 37 C.F.R. § 1.475. Section (e) of rule 1.475 plainly states that "the determination whether a group of inventions is so linked as to form a single general inventive concept shall be made without regard to whether the inventions are claimed in separate claims or

as alternatives within a single claim." As such, alternative language is not a grounds for establishing lack of unity of invention *a priori*.

In addition to stating that certain claim language causes an *a priori* lack of unity of invention as discussed above, the Examiner goes on to argue the restriction is proper under PCT Rule 13.1 and PCT Rule 13.2. In particular, the Examiner's arguments are set forth as follows:

> The embodiments listed above do not relate to a single general inventive concept under PCT Rule 13.1 because, under PCT Rule 13.2, the embodiments lack the same or corresponding special technical features for the following reasons:
>
> The embodiments are drawn to multiple organismal and nucleic acid sequences that are structurally distinct, independent and mutually exclusive embodiment that yields distinctly different effects. The numerous variations in the number, position and type of nucleic acid sequences and the gene products encoded therein result in a vast genus of structurally unrelated molecules that are not obvious variations of each other. Each of the embodiments confers a unique, non-obvious, distinctly different technical feature onto the transgenic cell or organism that will directly impact toxicity or bioactivity of the gene products and are non-obvious variants because one of ordinary skill in the art would not expect an episomal genetic construct to be equivalent in stability and generational inheritance as a genetic construct that has integrated into the nuclear genome, for example. Similarly, an artisan would not expect ccdB to be identical in effect as Hok proteins. Applicants are reminded that nucleic acid sequences encoding different proteins, and the amino acid sequences they encode, are structurally distinct chemical compounds and are unrelated to one another. These sequences are thus deemed to normally constitute independent and distinct inventions within the meaning of 35 U.S.C. 121. Absent evidence to the contrary, each such nucleic acid and amino acid sequence is presumed to represent an independent and distinct invention, subject to a restriction requirement pursuant to 35 U.S.C. 121 and 37 C.F.R. 1.141 et seq. Similarly, each transgenic organism is considered a distinct invention.

> Given the breadth of the claimed, unrelated structures, a search for all possible embodiments imposes an exceptional burden on the Office. As the technical feature linking the members do not constitute a special technical feature as defined by PCT Rule 13.2, particularly since each of the embodiments does not share a substantially common structural feature or function, the requirement for unity of invention is not fulfilled.
>
> Applicant is required to elect a single named embodiment as listed in the cited claims to which the claims shall be restricted. The reply must also identify the claims readable on the elected embodiments, including any claims subsequently added. An argument that a claim is allowable or that all claims are generic is considered non-responsive unless accompanied by an election.

See Restriction Requirement mailed March 29, 2007, pages 5-6.

Under the unity of invention standard as set forth in 37 C.F.R. § 1.475(a), the requirement of unity of invention is fulfilled when there is a technical relationship among the claimed subject matter involving a corresponding special technical feature. The expression "special technical features" means a technical feature that defines a contribution which each of the claimed inventions, considered as a whole, makes over the prior art. Applicants respectfully submit that, when considered as a whole, each of claims 15-24 and 26-28, has a common special technical feature over the prior art. The special technical feature is a eucaryotic cell that includes a genetic sequence encoding a non-native antidote molecule to a poison protein from a poison antidote group, the poison protein being encoded by nucleotide sequence under control of an inducible operator/promoter that is incorporated into the genome of the cell. Each claim recites this technical feature. The Examiner has made no argument that this unifying technical feature does not define a contribution over the prior art. The Examiner's argument for restriction rather seems to be a mixture of the rules for restricting independent and distinct subject matter, the USPTO policy related to nucleotide and amino acid sequence searching, and the rules for restriction based on patentably distinct species all weaved together using the vocabulary found in the rules related to unity of invention requirement. As such, Applicants submit that the Examiner has failed to provide any appropriate reason under the unity of invention standard as to why the

claimed subject matter should be restricted as set forth in section 3 of the Restriction Requirement.

In view of the above-described special technical feature, which is common to each of the elected claims, and the lack of any showing that this special technical feature does not make a contribution over the prior art, Applicants request that the Examiner withdraw the requirements for restriction as set out in section 3 of the Restriction Requirement.

In addition to the foregoing arguments, Applicants would like to point out that the poison proteins recited in claim 18, while not being obvious variants of each other, are related by both phylogenetically and by their mode of action. In particular, these proteins and their corresponding antidotes all form a group of procaryotic proteins referred to a plasmid addiction systems. The relationship among the proteins of plasmid addiction systems is described in the art. For the Examiner's convenience, Applicants submit herewith an Information Disclosure Statement containing references, which describe the structural and functional relationship between the proteins of plasmid addition systems (see particularly, Gerdes et al. (2007) *Current Opinions in Microbiology* **10**:117-124; Anantharaman et al. (2003) *Genome Biology* **4**:R81.1-15; and Schmidt et al. (2007) *J. Mol. Biol.* - electronic publication, each of these references being provided in the IDS filed herewith).

Finally, to bring the claims into better conformance with US practice, Applicants have amended claims 15, 18, 24, 27 and 28 to remove conditional and alternative language, which the Examiner has alleged gives rise to lack of unity. If the Examiner believes that the claims as currently written still lack unity, he is invited to provide an explanation why they do not form a single inventive concept under 37 C.F.R. § 1.475.

Please charge any additional fees, including any fees for additional extension of time, or credit overpayment to Deposit Account No. 11-1410.

Respectfully submitted,

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